AN

INTRODUCTORY ADDRESS

ON THE

METHODS ADOPTED BY THE DEPARTMENT

OF

PRACTICAL ART,

TO

IMPART INSTRUCTION IN ART TO ALL CLASSES OF THE COMMUNITY.

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INTRODUCTORY ADDRESS,

&c., &c.

On Wednesday last you were addressed from this place on the extended field of usefulness undertaken by this department of Practical Art, on the educational advantages it offers, and the instruction it affords to the public generally, as well as specially to the designer, the artizan, and the manufacturer. It is now my duty to endeavour to explain to you the nature of that instruction, and the methods which it has been thought advisable, after full consideration, to adopt in order to impart it.

The instruction heretofore offered in Schools of Design was intended to train designers, by whose skill our manufactures (allowed to be excellent in staple, in fabric, and in workmanship, although defective in design) might be decoratively improved, and to qualify artizans to execute with knowledge and understanding the improved designs resulting from such teaching.

You have already been told why this sphere of action has been enlarged; and that it has been thought necessary to educate the PUBLIC generally, not only to prepare them to appreciate such improved

works when executed, but because a knowledge of drawing is a valuable auxiliary in most trades, a means of training the perceptive faculties, and a useful aid in many of the ordinary duties of life: and I now enter upon my section of this subject, which divides itself under THREE general heads.

I°. The method adopted to give instruction to all in drawing, &c., as an improvement of the perceptive powers and the appreciative taste; with the collateral advantage of imparting at the same time a language of explanation between employer and workman.

II°. The more peculiar instruction which it is our office to impart in ornamental decoration, both as to power of execution, knowledge of styles, and proper application of ornament to different fabrics and manufactures; and this equally for the education of the art-workman, the training of the future designer, and the improvement of the public at large.

III°. And, lastly, the methods adopted in those classes which the department has provided for instructing the art-workman and the designer in their *special* branches of industry. In which classes, not only the principles which regulate the just application of design to the special fabric or manufacture are taught; but all those *processes*, whether of the hand, the machine, or the laboratory, which govern its production, are explained to the student by professors qualified for such specialties.

I°. *Elementary Drawing.*

First, then, as to the methods adopted to give instruction in drawing to all classes, which I may

perhaps be allowed to preface with a few remarks as to its general necessity to all persons and all classes. Instruction in the knowledge of *forms* and in the power of expressing or repeating images of those forms, whether they are solid or merely superficial, by lines, shades, or colours (or the arts of *drawing* and *painting*), forms a valuable part of education, considered only as a stimulant of the perceptive faculties, increasing considerably the power of seeing, and of seeing truly and rightly, all objects, and of perceiving many of their qualities and relations otherwise overlooked or not comprehended.

One who has been taught to draw has been taught to examine objects more carefully, to study them under various aspects and in different positions as to other objects; to measure, actually or mentally, their relative proportions, the effect of light and shade upon them, the changes that take place in their outline when looked at from various points, the nature and quality of their surface,—whether glossy or absorbent, opaque or transparent,—its colour, texture, &c.; and his mind is thereby rendered alive to the examination of combinations and qualities of other kinds and belonging to other departments of his mental training. The time has now passed, I trust never to return, when mere reading and writing were considered the only necessary *education* of a large section of the people. These are now felt to be only instruments of education — keys to open the door of knowledge, but not in themselves knowledge. Now, as far as knowledge consists in a perception of the nature, qualities, and properties of things, I have shown that *drawing* must be considered a valuable part of the science of education. But drawing has

yet another great use—as a means of explanation—as a language, by the aid of which men may explain and describe, far more readily than is possible by words, the forms and other properties of objects: that which can be conveyed but imperfectly by pages of writing, may be readily and accurately described by the graphic sketch of the practised draughtsman, and that as intelligibly to the Chinese or the Indian, as to the European, or to his own countryman.

Thus, for instance, if I were to attempt by words to describe a flower to one who was unacquainted with the scientific terms of botany, how little impression of it would they convey to his mind! I might say, that the flower hung downward from the bough; that it commenced with a long stalk; then there was an oval-shaped knob, which was the early state of the seed-pod or vessel; that below this, with an indented neck between them, was another larger oval-shaped hollow form; that this was again drawn into a smaller neck; and then, spreading out, the tube was split into four leaves, shaped like the tops of spears with their points downward and spreading at the points, and that this part was of a bright crimson colour; that within this was a leaf twisted round of a purple colour, out of which hung a long whitish spike with six other shorter white spikes, &c. &c.; but, after all, what does this bring to the mind?—while, taking the chalk in hand, it is at once made apparent to every one; and, if drawn to the right size, I think few would fail to recognise the fuschia.

Thus then drawing becomes, so to speak, a lan-

guage of accurate description, a universal medium of explanation, and moreover may be, to men of other professions as well as to the artist, a means of treasuring facts and collecting stores of truths; and the surgeon and engineer, the botanist, the zoologist, the entomologist, and indeed many other professions, may, equally with the artist or the architect, write down in such a shorthand the interesting facts of their profession; while the manufacturer, the tradesman, and the artizan can by its means keep a common-place book of valuable hints and recollections. Again, by means of drawing, the employer and the employed interchange their mutual wants in a manner so easily intelligible that mistakes and errors are almost precluded, and the time and property thus saved amply repay the hours of study necessary to attain such a means of intercommunion of ideas. Added to all these advantages—advantages, you will observe, common to all men — there is this further one, bearing expressly upon the objects for which Schools of Design were originally founded by the Government, namely, that the training in form, in proportion, in beauty of contour and in colour,— in fact, the education of the eye necessarily obtained by the practised draughtsman,—together with the study of the examples which in the course of training will be set before the student, so influence his judgment, and so improve his taste in the progress of their acquirement, that another great end now proposed by this Department will have been arrived at, and we shall have educated a public qualified to perceive and prepared to appreciate what is right in principle, refined in taste, graceful in form, and harmonious in colour, in the decoration of our various

fabrics and manufactures. To arrive, however, at this valuable result, the training given to the student must not be of a desultory nature, but advance step by step in a defined course. We have no short cut to offer, but must endeavour to enforce that course which experience has shown to be attended with the best results; and, in any new directions wherein instruction is to be given, to proceed in the manner which general experience and full consideration shall point out as likely to prove most effectual. Believing that there is no royal road, we feel that what is good for the peer is good for the peasant also, in kind at least, if not in degree; what is proper for the artizan is proper, also, for his employer; and that no training less than that which tends to a perfect education of the eye to see, and a perfect subjection of the hand to execute what the eye perceives, can be right in us to adopt, or for you to seek to obtain.

When we reflect upon what was formerly the mode of teaching drawing in our schools and seminaries, public as well as private,—to which perhaps many of you were subjected, as I myself was in my school days,—you will be satisfied that the method then in vogue, and not yet entirely superseded, was not of a character to lead to the end I have just alluded to. It barely consisted in rudely imitating a few flimsy landscape-drawings in pencil or water-colours; when, if there was any traceable resemblance between the example and the pupil's copy, the master added "*a little touching up*," to make it pass muster at the Christmas holidays, when, duly mounted and enshrined in silver paper, it was sent in with the Christmas bill, as a peace-offering to set against the amount of the "drawing account," im-

posing itself on the poor simple parents (ready enough to believe in the talent of their offspring) as a real gem, from the care and pains with which the jewel was mounted.

But was this drawing?—was this the useful art I have attempted to describe? Proportion had no study,—the imitative faculties were hardly called into action,—the work had no reference to any thing in nature; it was called a landscape, it is true, but it had been so emasculated and conventionalised by the master to bring it within the power of the pupil, and he, in his turn, copied it so unlike the original, and with so little thought of the *thing* represented, that when finished it had little in common with the heavens above or the earth beneath; and the pupil left school, of course, perfectly powerless to use drawing in after-life for any of the purposes I have described.

Let me add, that the art-teaching which I have just described was considered almost a luxury of education, an extra given only to the upper and middle classes, whilst it is now considered desirable to offer to all that intelligent instruction, of which I previously pointed out the uses and advantages. For the Lords of Her Majesty's Privy Council for Trade, to whose jurisdiction the department of Practical Art appertains, have come to the conclusion that elementary instruction in drawing should now be imparted to all classes. The question then arises, how, then, can this instruction be best afforded; and what are the readiest, simplest, and, at the same time, most effectual means towards that end? On this subject opinion has been greatly divided, and two opposite modes of study have been advocated. One method

inculcates the use of *real models of* SOLID *objects* only, as examples for study, which are to be at once imitated on a flat surface under all the changes incident to the varied position of the various pupils in relation to the model. This method, promulgated in France as the system of M. Dupuis, was introduced into England by the late Mr. Butler Williams, and received the patronage of the Committee of the Privy Council for Education; those who would wish fuller information as to this course of study will find it in the valuable works of Mr. Williams, published by Messrs. Parker of West Strand. The other method advocated the use of flat examples only, as a means to educate the eye and hand to correctness and obedience; and I will now endeavour briefly to point out their separate advantages and defects in reference to a plan of general public instruction in drawing. The first—the method of Dupuis and Williams—is certainly calculated to enable the pupil to comprehend the apparent forms of *solid* objects, and to represent those forms on a flat surface. Moreover, without entering into the theory of linear perspective, it gives certain empirical rules which greatly facilitate the student in drawing the true appearance which *objects* present to the eye, whilst by this system the real object is united in the mind of the pupil with its pictorial delineation. These are important points, doubtless; but, to counterbalance these merits, this system at the outset offers three difficulties to the student instead of two. He has not only to train his eye to a sense of correct proportions, and his hand to obedience in delineating them, but, at the same time, to master the difficulty of seeing objects not as they really are, but as they would

appear on a plane intersecting the rays passing from their various parts to the eye,—in point of fact, with an uneducated eye and untrained hand, to endeavour to reduce solid forms to a surface representation of them, and consequently has, from the first, to contend with so many explanations, rules, and technical terms, as to oppose serious obstacles to his progress.

Even when the perseverance of the student does overcome these difficulties, the best qualities of the draughtsman have not been obtained; but delicacy of perception, and an appreciation of refined form, are partially sacrificed to a coarse and bold style of imitating a few models of the most obvious solids. Nor is this all. However theoretically perfect this method of teaching may be to give a power of imitating solid objects, it is yet defective in an important point as a system of GENERAL INSTRUCTION in drawing, and more especially so as connected with this department of Practical Art. The geometrical representation of objects—and by geometrical representation I mean the real imitation, exact as to parts and proportions, as contrasted with the perspective delineation (in which sense the act of copying a flat example, or drawing, is a geometrical imitation of that example), has no place in it, and seems perfectly overlooked. Mr. Williams sets out with saying, that "all *real objects* have three dimensions, namely, length, breadth, and thickness;" which, though theoretically true, is not really so, since drawings and patterns are objects as well as solid bodies, and yet, as such, have only superficial dimensions, and not thickness. Passing over these entirely, Mr. Williams proceeds at once to treat even lines and

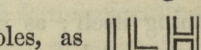
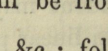
plane surfaces perspectively. Now, in any general method of teaching drawing, and quite apart from any special direction, this exclusive attention to solid objects and their perspective delineation is insufficient. It ignores the wants of a large class, indeed of large classes of students, and denies a large share of that knowledge which every man requires as a part of such instruction. How many are there to whom a power of geometrical imitation is far more valuable than that of perspective imitation! For instance, in all drawing as explanatory between employer and employed, in working drawings, and patterns, from the plans used by the carpenter and gardener to the patterns for the sempstress and embroiderer, a power of delineating exact superficial forms is needed, and for many of such purposes a knowledge of linear geometry also; nor is any course perfect without instruction in such drawing.

Even viewed as a means of training the perceptive faculties, it would be difficult to show that the imitation of refined and beautiful forms, although from flat examples, — the study thereby of symmetry, balance of parts, beauty of curvature and proportion, when combined also with mechanical geometry and theoretical perspective, — was not as efficient to sharpen and improve the perceptive faculties, as the effort to draw solid forms correctly on a plane surface alone. Having been thus lengthy on the merits of and objections to a pure system of Model Drawing, I must say a few words on the other method, — that of teaching from flat examples. This is calculated to remove some of the obstacles which impede progress, since the mind of the student is not occupied with the difficulties arising from having to reduce solid forms

to a flat representation of them. The hand-training also having a larger share of attention, the fault of coarseness, and mere symbolic drawing, is in some degree avoided; and by this method the eye is left more completely at liberty to dwell upon proportion, balance of parts, and beauty of curve. At the same time, the student is apt to overlook the THINGS themselves, to dwell solely on the drawing, and not on the object drawn: he thus obtains only the power of imitating a drawing, and, set down to a real object, he is too often found utterly powerless to represent it truly.

I will now proceed to explain the method about to be adopted in the schools in connection with this department; but before doing so let me revert to my former illustration of the fuschia, to explain the various modes of imitating form by drawing, to which I have already alluded, and which are united in the skilled draughtsman. The first mode of imitation consists in drawing from flat examples, or copying a drawing already made,—as the fuschia at page 44., for instance. This mode may again be subdivided into *geometrical free-hand imitation;* and geometric drawing wherein the draughtsman is aided by the use of instruments, applicable to right-lined forms and curves of known centres. The second mode consists in copying the thing itself; as if a real fuschia, or any other *object*, were set before the student for imitation; this may be called the *perspective free-hand imitation* of objects; here, also, in the production of right-lined objects, the student may be assisted by instruments, as is the case in linear perspective. The third mode consists in drawing from memory any required object, either free-hand or by means of in-

struments: this must be the result of much prior labour and observation, assisted by a thorough knowledge of the theory of Perspective, and shows the finished and skilful draughtsman, according as such representation from memory is more and more correct.

In order to avoid the several difficulties and defects of the two systems of instruction already described, and to comprise what is really valuable in both, so that the student may be qualified to draw, not only from flat examples and from objects, but in the end attain the further qualification of drawing from knowledge, which is so valuable to all, it has been determined to adopt a mixed system of instruction, and to divide elementary teaching into two short courses. The first from flat examples, wherein the pupil will have set before him for imitation, and to train his hand, *drawings* of forms taken from objects which in themselves are superficial, or whose general aspect is flatness; so that he will not be imitating entire abstractions, but be reminded at the same time of a known object. Thus in order to commence with right lines in various positions, of various proportions, and at various angles, the right-lined letters of the alphabet, simply drawn of a sufficient size to exercise and strengthen his hand, will be used as examples, as  together with the forms of other superficial right-lined *objects*. As he proceeds to curved-lined forms, the first examples will be from the curved-line letters,  , &c.; following these, other superficial cnrvcd forms will be used; and afterwards,

drawings of the *symmetrical* forms of leaves, such as the laurel, ivy, plane, horse-chestnut, sumach, &c., to accustom him by *geometrical imitation*, to proportion, balance of parts, and beauty of curve; the whole forming a first course of geometrical free-hand imitation, preparing him, if his future occupation renders it desirable, to take up a further course based on the more abstract curves of ornament, and leading to admission, if it is required, into the elementary schools of Ornamental Art.

As a completion to this first flat course the student will be led through a short course of mechanical geometry, with the use of instruments, to give him thereby a precise knowledge of superficial forms, and that means of accurately measuring and setting them out, which is so valuable to *all*, and especially to the workman. Thus armed with some amount of hand power, some training of the eye, and a degree of knowledge of *technical terms*, the pupil will be prepared to enter upon the elementary course from *solid examples*. In this course *solid objects* only will be set before the student, the master giving such verbal instructions, and such illustrations on the black board to the pupil, as will enable him to proceed, step by step, from a line seen perspectively, to a plane surface under all its perspective changes; to combinations of plane surface forming solids, and their perspective change to the eye of the student; afterwards passing through spherical solids, until objects of beautiful contour, such as vases, shells, &c., are set before him for imitation, his perceptions being trained, step by step, to comprehend and interpret the various difficulties that arise. To complete his real knowledge in this section, a short course of

linear perspective, with the use of instruments, will be prescribed to the student, to give him a theoretical knowledge of the cause of the apparent change in the form of objects relatively to the surface on which they are delineated, and the points from which they are viewed;—the course terminating in *his being taught* the most effective means of producing the appearance of light and shade and relief by black and white, by the use of crayons and the stump on tinted drawing-paper.

Such a combined course of elementary instruction as has been described will, when completed, have given the student a power of close and refined imitation from the flat, a knowledge of the elements of practical geometry and perspective, and the power of drawing from objects themselves;—combining the truly valuable points in the system of Dupuis and Williams, with that other instruction which is wanting in their course, and preparing the student, if desirous of further progress, or whose business in life requires further instruction, to enter the Government Schools of Ornamental Art.

The pressing demands made upon the Department for assistance in Elementary instruction has necessitated an arrangement which was explained to you by the General Superintendant in his lecture. It has been found necessary to appoint a "teachers' training master" not to interfere with the class for training masters at Somerset House, to which I shall afterwards call attention, but to enable the masters in national and other public schools, not yet able to afford or to obtain the assistance of a regular drawing teacher, to make use of the drawings and models which we are about to supply, and to carry on, at least temporarily, the course of instruction I have just explained to

you. Herein the instruction will be verbal and explanatory, the black board being used by the training master for illustration. For instance, he will begin with showing the value of horizontal and perpendicular lines; and, first making the masters aware of the necessity of thoroughly explaining these terms and all other terms used in the most simple language, will show that in geometrical imitation these lines are entirely governed by the sides and bottom or top of the paper, slate, or board used by the pupil: he will then explain their value as a means to measurement and proportion, and for determining the direction of oblique or slant lines. He will proceed to show how readily linear forms are drawn, when the constructing lines are first attended to,—as, for instance, the dark lines on which the dotted form of the leaf in the margin is constructed,—and what a ready means these constructing lines are of giving the pupils a sense of balance, proportion and symmetry of parts. This will lead him to explain the nature, properties, and relative proportions of the various other forms, and the structural lines by which they may best be geometrically imitated, ever impressing upon his class, that, in their capacity of teachers they must use the most simple language and carefully abstain from the use of technical or scientific terms. Not to dwell too long on this part of my subject, the training master will next explain the method of teaching from model forms. First taking into his hand a rod of wire, he will show the class its change of form relatively to its changed position in re-

spect to the draughtsman,—from appearing as a mere point, when presented directly to his eye, to its being seen of its real length when parallel to him. The class will then be shown how the same changes take place in a superficial square,—from its appearances, as a mere line when its edge is placed towards the eye, to its perfect equal-sided right-angled form where the front of the object is directly opposed to the spectator. After this, the changes in the form of a cube will, in the same manner, be explained and illustrated, —from its appearance as merely a superficial form to the development of first, two, and then three, sides, as it is variously placed before the draughtsman.

After leading the class to comprehend the course adopted and the methods to be followed by the teacher in using the examples, those who are training in this peculiar class will next be required to explain verbally, and with rough diagrams on the black board, the problems of Practical Geometry, and some of the simpler problems of Linear Perspective; thus instructed, and with the aid of a "Manual for Teachers," which is in course of preparation, we may hope to meet the immediate pressure on the department, until masters more thoroughly qualified can be instructed for such duties, or whilst these teachers proceed to acquire in the class for masters at Somerset House that power of drawing which can alone render them fully eligible to instruct others. I now proceed to the methods of instruction followed in the Government Schools of Ornamental Art.

Having explained to you the methods adopted to teach Drawing as a branch of general education,—its use being as an aid to perception and a language of explanation,—I have now to speak of the course

of instruction in *Ornamental Art*, which instruction, although in some degree special to the artizan and designer for our various manufactures, is yet, more or less, necessary to the manufacturer who produces their labours, to the merchant who sells them, and to the public who are to be the purchasers and consumers. For this reason, the views formerly entertained restricting this instruction to artizans, and to those whose special business is to *design*, have been modified, and the teaching is now open to all who choose to avail themselves of the advantages the schools and class-rooms offer, if they, on their part, can show that they are capable of availing themselves of these advantages.

Heretofore in my explanations Drawing has been viewed as a part of the general education of all classes, and, of course, the time to be devoted to its practice could be but small (probably, on an average, not more than two hours per week), in consequence of the equal or greater claims of many important branches of instruction. But now we come to view Drawing relatively to those to whom it may be hereafter an important part of the general business of life,—those who will be able, from having completed much of their previous education, to pay special attention to Art, and to give up to it a large share of their time, and who, as the elementary instruction before described begins to develop itself, will come to these higher schools prepared to benefit more immediately by their teaching. At the same time, it is necessary so to adapt this teaching, that, while it will be fully adequate for all to whom Art will be the business of life, it may be useful also to the public, and enable them to avail themselves of such parts of

the course as may perfect what they have already attained in the Elementary Schools, and teach them those general principles which are to regulate the judgment, and refine and improve the taste of all: for this purpose, Schools for the attainment of technical skill are necessary; a Library, wherein Art must be the predominant feature; a Museum of the rarest works of art and manufactures; and Lectures by various professors, on subjects connected with the special direction of the art in its future application to manufactures.

I shall proceed, in the first place, to describe the methods of instruction adopted in the schools, since the library, the lectures, and the museum will be referred to more particularly in the third part of my address. There are some modifications in the arrangements connected with Schools of Ornamental Art, both in London and the provinces, arising out of local circumstances, which it is not necessary to enter upon here; it being better to explain the general course, rather than to refer to exceptional changes. Up to the present time, the general education of students entering these schools has had no consideration; but it is intended to require in future, from all who seek to enter the morning classes, a certain proficiency in reading, writing, arithmetic, and some of the simpler geometrical problems. The instruction in these schools is arranged under four heads,—Drawing, Painting, Modelling, and Composition,—these four sections being subdivided into twenty-two stages: not that each student must pass through all these stages, but that such a course affords complete instruction in the technical means of drawing, painting, and modelling, and includes some insight into Ornamental Composition.

The stages are usually classed as under:—

			Stage
Drawing Course		Geometrical Perspective and Architectural detail	1
	Ornament	Outlined from flat examples	2
		„ „ the round	3
		Shaded from the flat examples	4
		„ „ the round	5
	The Figure	From flat examples	6
		Outlined from the Cast	7
		Shaded from the Cast	8
		Anatomy	9
		Flowers, outlined from Nature	10
Painting Course	Ornament	In Monochrome	11
		In Colours	12
	Flowers	From flat examples	13
		„ Nature	14
		Compositions of Objects as Studies of Colour	15
	The Figure	From Casts	16
		In Colour	17
Modelling Course		Ornament	18
		The Figure	19
		Flowers and Objects from Nature	20
		Studies from the Life	21
Composition in Design		Elementary Design	22

I must, however, remark upon stage 1.,—Geometrical and Perspective Drawing,—that, although placed as the commencing stage,—Geometry being the basis of all ornament,—in practice it is rather the second stage, and should change places with stage 2.; the student really commencing with a severe course of Ornamental Drawing in outline from flat examples, which experience has proved to be a very efficient means of giving the fullest power to the hand and correctness to the eye; the first being obtained by drawing the long, flowing, and graceful curves of ornament,—such study correcting the one-handed direction of lines, if I may so describe it, which has resulted from writing; the other,—correctness of eye,—arising from the nicety required to imitate the pure curves of ornament, and its sym-

metry, and exact balance of parts; — qualities not usually found in natural objects, as seen and drawn perspectively.

I need hardly lead you, step by step, through this varied course,—it speaks for itself,—as to the power which must result from earnest study on the part of the student: I will rather make general remarks on the whole course, and on any stages that may appear to want explanation. You will at once perceive that the same system prevails in this as in the before-described Elementary Course; and here, at least, we have the experience of some years of success to support us in its value; I mean, the practice from flat examples before the use of *solids* and *objects*, but with immediate recourse to the *objects* on the student attaining hand-power to execute them.

Thus you will notice that stage 2. is ornament outlined from flat examples, while stage 3. consists of ornament outlined from the cast, or from solid forms; and in this stage solid objects, such as the Models of Dupuis and Williams, are used, as well as casts of ornament. Here, also, the previous study of Practical Geometry and Linear Perspective aids the student in comprehending the changes of form which take place on any change of his relative position as to the object he is drawing from, and which, to draw it correctly, he must now understand. Then, again, stage 4. is shading from flat examples, while stage 5. consists of studies from the round, or from casts in relief; and so on throughout the course from the figure to flowers and fruits — in painting, as in drawing, the same system prevails. In the painting stages practice is commenced in light and shade by black and white only, and, having learnt to over-

come some of the first difficulties of execution without colour, the student then has coloured examples set before him. As his powers of execution improve, he makes separate studies of flowers, fruit, &c., first from flat examples, and afterwards from nature, proceeding in the end to group and arrange coloured objects as a study of composition.

All are taught to paint in transparent water colours, in tempera or body colours, and in oil; and, where such special means are necessary, in encaustic and in fresco also. In passing through the painting stages, the pupil is required to answer any questions that may be put to him on the laws of colour, its harmonious arrangement, and the relative quantity of tint or hue which is agreeable to the eye on any general distribution; and he is thus prepared to enter upon the study of Ornamental composition, in stage 22. If the future business of the student requires modelling for its expression, rather than painting; after he has passed through the first ten stages, he begins to work in clay, and models first from reliefs or round examples, and afterwards, as he acquires facility and power, from flat examples; as, for instance, from prints and drawings, rendering their apparent into real relief, thus reversing the mode of study in the stages of drawing and painting. The study in this section is conducted, first from ornament, then from the figure, and afterwards direct from nature, as in fruit, flowers, and from the human figure and animals.

Having thus acquired a competent share of technical skill, the student is prepared to enter upon Elementary Design, — the twenty-second stage of progress. Hitherto the study of the pupil has been

strictly imitative; that is to say, he has obtained technical skill in the use of his tools and materials by means of exact imitation, and, in this respect, the route of the artist and the ornamentist has been so far the same. But in this stage the special direction of the latter, which had as yet only been suggested by the examples used for the purposes of study, becomes real; and the ornamentist enters upon the consideration of the fundamental principles wherein his Art differs from *Fine Art;* the latter continuing to rely on a selected imitation of nature, pictorially and perspectively treated, as his means of expression; whilst the former — the ornamentist — is taught to make use of whatever is beautiful in nature, either in form or colour, irrespective of imitation or actual combination; — nay, often designedly rejecting them: choosing the general expression of objects, rather than likeness; symmetry of parts and balance of quantities, rather than variety; the normal rather than the individual form; beauty of line, rather than peculiarity of structure. In this stage the ornamentist has explained to him the leading characteristics of styles and periods of ornament, and the laws which ought to govern its application to various materials. His formerly-acquired knowledge of linear geometry enables him to regulate the distribution of the quantities of his ornament over large surfaces. He is taught how to conventionalise and reduce natural forms to ornamental ones; to arrange colour on given spaces, according to the laws of harmony and right proportional quantity, and strength of tint, hue, or shade; and having, during his progress through the prior stages of the schools of Ornamental Art had opportunities of attending the

lectures of the Department on styles and periods of ornament, and their general characteristics, he ought to be prepared to give his knowledge some specific direction, by entering into some one or other of those special classes which are to be described in the third part of this address. I ought to mention that the same course of instruction is adopted for both Male and Female students.

Before passing from these schools, however, I must notice a valuable additional class which has been formed for the education of masters for the elementary schools. In this class, after having passed through the first six stages of the before-named course, modified to suit their peculiar wants, these candidates for masterships have themselves a class to teach, to which they give verbal instructions and illustrations on the black board in geometry, perspective, and the method of drawing from models, in order to prepare themselves for their future duties as masters. In the performance of this duty they are required to use the simplest terms of explanation, so as to make themselves intelligible to the most uneducated, and to endeavour to interest the minds of the students in their work by apt illustration and intelligible language divested of technical terms.

There are two classes at Marlborough House which, in some degree, are supplementary to the course of instruction at Somerset House. I will shortly explain them before proceeding. The first of these is, the

Class of Artistic Anatomy.

This class (together with that for Architectural Details and Practical Construction) is complementary

to the instruction given in the schools of Ornamental Art, and is required to have been passed, or, at least, that its studies should have been commenced, before the student can enter into some of those special classes hereafter to be described; — such, for instance, as those for Metal Working, or China Painting. It combines the study of the human figure with that of its anatomical structure. Occasional reference is also made to the comparative structure of animals. It is necessary that the student, before entering, should have attained proficiency in drawing and painting, or drawing and modelling, either in one of the schools of Ornamental Art, or otherwise; so as to be able to benefit immediately by the special instruction of the Professor. The plan adopted is that of analysis. The student commences with making careful drawings in outline from casts of the head or extremities of the human figure, and afterwards, under the instruction of the Professor, describing within that outline, in their true position, first, the bony support of the parts, and then the muscles which give them motion and largely determine the form; finally, he completes a study in light and shadow from the object, in the same position. After studying the extremities, he proceeds to the complete figure from the antique; first outlining the figure, then placing the bony framework within the outline, and afterwards the forms of its outer layer of muscles; the Professor explains those more deeply seated, and remarks upon the action of both as motors of the figure studied; and the same figure is afterwards carefully studied by the pupil in light and shade. This method is adopted also for the student of painting and modelling. In due course

the modeller is taught also the principles of relief, both high and low; while the painter has explained to him the various technical modes of flesh painting.

From time to time the living model is set in *pose* by the Professor, for the pupils to study, and explanations of the position, and of the muscles called into action by it, are given during the period the model sits. The studies in this class, also, are either by drawing, painting, or modelling, and after each *pose* is completed, the figure is analysed by the student, who follows the method before described in his antique studies.

Occasionally, a limb, or some other portion of the structure of an animal is dissected and demonstrated to the pupils, and compared with the same portion of the structure of man: as, for instance, the pectoral muscles of birds, which are largely developed to assist in flight, are compared with those of man, or with those of quadrupeds, such as the horse or deer, wherein the action of the fore limb is simply progressive. The pupils are expected to make drawings of such dissected portions, after the clinical demonstration by the Professor. Such studies as those I have explained to you, prepare the designer or the artisan for the highest art development of his profession, and fit him to exercise his skill and manual dexterity in the metal class, in china printing, or in architectural decorations, wherein the ornamentist is as nearly as possible merged in the artist.

Class of Architectural Details and Practical Construction.

This class, as well as the class of Artistic Anatomy, is in some measure complementary to the instruction

given in the School of Ornamental Art at Somerset House. It must be remembered, that the public has not yet arrived at a belief in the necessity for our dealing with Architecture as a science or as a fine art; as requiring the exercise of the inventive faculties, or the application of the principles of science to construction. At present, therefore, the student is only taught to reproduce to the eye what has been already done, and to delineate the inventions and scientific adjustments of others; whether or not it is desirable or possible so to restrict ourselves, we must leave to the public to determine by the amount of instruction they may hereafter seek to obtain from the classes of the Department.

The student on entering the class of Architectural Details is required to go through an extended course of Practical Geometry, and is afterwards taught to apply it to the purposes of practical construction, in laying down the lines for, and setting out, carpenters', joiners', masons', smiths' work, &c. He is taught, for instance, to make drawings of constructive carpentry, including the framing of roofs, floors, partitions, staircases, &c.; the modes of obtaining the moulds of groin angles and intersections, the stretch-out of soffits, and generally whatever will enable him to prepare accurate working drawings of construction for the craftsman in any trade.

He then enters upon a course of architectural details, such as the sections and forms of mouldings, cornices, architraves, &c., the proportions of the various classic orders, the details of Gothic architecture, and the methods of finding the structural lines and centres of Gothic tracery. Plans, elevations, and sections of apartments, and portions of

known buildings, are laid down, from drawings or written dimensions, to scale measurement. The student proceeds to an extended course of linear perspective, to enable him to delineate buildings, furniture, or utensils, to scale measurements from their plans, elevations, and sections. In the progress of his studies he is taught the scientific projection of shadows, applied to architectural drawing, as well as the methods of tinting required to complete such studies. Where necessary, isometrical perspective is added, and thus all may be more or less prepared for their duties in life, or for entering those special classes, which I shall endeavour to explain after some remarks on the necessity for their establishment.

Having described the methods adopted to give elementary instruction in *Drawing*, and instruction in Ornamental Art, I have now to speak of those classes which have been instituted at Marlborough House, and which, in conjunction with the further aids of a museum, a library, and lectures, are intended to complete the education of the Ornamental Designer, and to give special and definite direction to his labours; and not only this, but to be the means of educating the taste of the general public, by whom his labours, to be successful, must be appreciated. Before the establishment of this Department, the Government Schools of Design, after giving the pupils technical skill in drawing, painting, and modelling, and imparting to them a knowledge of ornamental styles, were expected to enable the student to turn his attention to designing for any special branch of manufacture which he might determine to pursue; for this purpose it was not only

necessary to teach him the principles and laws which should govern the application of ornament to peculiar fabrics and manufactures, but the *processes* which govern the production or fabrication of his *design*. In old times the designer and artificer were frequently united in the same person, and the mind which originated worked in perfect accordance with the hand which produced; a few trade secrets being all that was needed beyond the technical skill of the workman. This was largely the case with the mediæval artists, as well as with those of the finest period of the *renaissance*. Their effort was to produce *one* work, and to produce it perfectly, without reference to a series or to repetitions. Even in cases where the designer and craftsman were not united in the same person — since machinery had little to do with production, and all works were more or less perfect hand labour — the knowledge of the possible in the designer was complete. But in our days, when one design has to be repeated by thousands, and the most complicated machinery is planned to execute it, the designer has constantly to keep up his knowledge of the capabilities, and to acquaint himself with the powers of the machine; he has to study its capacity to produce his ornament, and not only to produce it, but to produce it in the manner least costly to the manufacturer, who, exposed to constant competition, has on his part to strive continually after new movements — new actions of the machine — to render less costly the complicated and difficult designs required for the market. An impossible colour or tint may change the whole beauty of a design in the production. One colour more or less may add to or diminish the cost, making it be-

yond or within the price possible for the manufacturer; even the alteration of position of the same colour or tint may have such an effect on the cost of production as to eat up the profit of the manufacturer. Moreover these points, by the production of new machinery, by increased chemical knowledge of new mordaunts and dyes, or new adaptations of old processes (as, for instance, of the machinery used for calico printing, to printing paper hangings, which has quite changed the state of the trade), are in a daily state of fluctuation and change.

When all these circumstances are considered, you will at once see the impossibility of a master—whose time is already occupied in giving instruction in Drawing, Painting, and Modelling, as well as in Styles of Ornament—being supposed capable of keeping pace with the improvements and changes not alone of *one*, but of all branches of manufacture requiring Design: and who could blame the manufacturer for not purchasing designs; which, although in good taste, and in conformity with the laws of Ornament, for want of this knowledge being imparted to the student, had to be so modified to permit of their production, as entirely to alter their character, and largely to impair any originality they might in the first instance possess. We ought not to be surprised, therefore, that the manufacturer was contented to retain those designers, who, if less educated in point of taste, were aware of the best means of fabrication, the conditions that regulate cost, and had that amount of taste at least, required to satisfy the purchaser, and to furnish the demands of the market. It was from these considerations that it was thought necessary to institute special classes, wherein the

students, after having been taught Drawing, Painting, and Modelling, in the schools, should apply their powers, under the instruction of able professors in special classes to produce designs, and, in some cases, to acquire technical skill as Art-workmen. In such classes the student will be able to obtain information; first, as to all the principles of fitness and choice which should govern the application of Ornament to the special fabric or manufacture; and, secondly, as to all those peculiar processes of Manufacture, whether by the hand or the machine, which are to control and regulate his labours, together with all improvements, chemical, mechanical, or manipulative, which from time to time arise to change the laws of production. The professors will be aided, in these respects, by a staff of able lecturers, on the history and styles of Ornament — on Chemistry, Botany, Metallurgy, &c., connected with Art, and on any other subjects that will give information to the public and the student on these questions. Moreover, there will be at hand a Museum containing the rarest works which can be obtained; excellent either for design or for skilful execution, and a consultation room supplied with specimens of the best current productions of the manufacturer, in order that the state of the markets may be ascertained, and the direction of public taste, so as to aid us in the endeavour to turn it, as best may be, into those channels which seem most consonant with what is excellent, beautiful, and true. Here, also, will be at hand a library of reference, containing plates and descriptions of those rare works of past times, which are otherwise inaccessible, and wherein the literature of Art is ever ready to the student's hand.

Of these Special Classes, five are already in operation.

A Class for Wood Engraving; at present, for females only.

A Class for Chromo-lithography; at present for females only.

A Class for Woven Fabrics and Paper Hangings; for both sexes.

A Class for China Painting; for both sexes.

A Class for Metal Work; open only to male students.

In these classes the student is first set to copy the rare works in the Museum of the Department, either those which are the property of the public, or those which may be lent from time to time for the purposes of study.

He has explained to him the peculiar processes used in their production, as well as the excellences of design or workmanship they display; and he then proceeds, under the instruction of the Professor, to exercise his invention or even his manipulative skill in the production of like works, embodying those excellences and those principles which he has learnt in the previous study, and employing all the ornamental knowledge and knowledge of the laws of construction and colour which he obtained in the schools. From time to time he visits the manufactories in company with the Professor, who there explains the actual processes and machinery, and points out the causes which must limit and modify the inventive powers of the designer. To stimulate his industry, a series of prizes are offered for designs for the ornamentation of the special fabric or manufacture, in which designs those conditions are to be

observed that the Department consider should regulate the application of Ornament to its decoration. To these prizes manufacturers are also invited to contribute; and it will be found, by our annual prize-list, that they are beginning duly to respond to the call.

Before concluding my address I have yet to trespass a short time on your patience, whilst I say a few words on the education of the public, whereby to enable them rightly to appreciate what is just in taste and excellent in Decorative Art. Though last to be spoken of, this is certainly not the least of our duties, since, unless effected, it is to be feared that all other efforts will be useless, and any improvement in design a thing beyond our hope. Until men turn their attention to the subject they are little aware how entirely empirical most of their judgments in matters of taste are, and consequently, as to what is correct and just in Decorative Design also. Men are inclined to believe that judgment on objects of taste does not depend on any acknowledged principles nor can be defined by any rules, but is an innate feeling or perception; and the trite maxim that "*taste* is not to be disputed" — which is as much as to say that it is amenable to no laws — is still the measure of public opinion in the matter. It is true that we allow that there is a City taste, and a West End taste, a Provincial taste and a London taste; and although these are each known to have their distinctive differences and characteristics, they are considered to depend on the sentiment of this or that public, and are believed to be under no rules nor regulated by any laws. But is it really so? is true judgment in matters of taste neither to be imparted

by any teaching nor improved by comparison or observation? We venture to think not, and shall endeavour to point out what causes excellence, and give reasons for preference, as the *principles* which are to regulate and guide us; not as dogmas, or as infallible, but open to all objectors who diligently seek after what is true. The fact is, that the ignorance of the public in such matters is most melancholy, their want of guidance like that of a child, and deeply have they paid and are still paying for that ignorance. This causes men to rely on precedent and the authority of past times, or on fashion: instead of striving for proper information on which to found their judgment, and then thinking and judging for themselves; they trust to what has been done before as right, and do not stop to consider what should be done now,—what is suitable to present wants.

Let me give you two or three illustrations of this, turning first to Architecture, which must be considered as the parent of Ornamental Art. The rich man who is about to build a mansion in these days, does not set down to consider what is useful and what he really wants, how many rooms, what aspect for health, what arrangements for comfort, what order of distribution of the offices for convenience, but, referring to the past, or to some prevailing fashion, and considering decoration before utility, he instructs his architect what *style of Architecture* shall be adopted: his house must be castellated, Gothic, Grecian, or Italian; it must have a cloister, a portico, or a colonnade, whether it is to be a place he can live in when built or not. Thus instructed, and not allowed to exercise his own judgment, the architect also reverts to precedent and authority, and the

estate is cumbered, it may be, with a load of stones called a castle, with walls whose thickness increases the space in his client's pockets at the expense of space in his rooms, duly ornamented, no doubt, with corbels, battlements, and embrasures, things perfectly useless in the present age. The whole when completed is an unsatisfactory absurdity, and the employer pays the penalty, not only in money, but in the inconveniences of dwelling all his days in a dark, gloomy, unsightly, and inconvenient abode. It may be, however, that the builder of the mansion is emancipated from the rigours of mediævalism, and desires a palace or a hall in the Grecian style. It is furnished with a portico according to the strictest Greek proportions, but to allow of this magnificent portico the lower rooms are so lofty that their size dwindles into insignificance, the two wings are cut apart by a splendid entrance-hall and a staircase that leads to bed chambers lighted by *skylights*, for windows in the front would derange the architectural disposition; thus, the possessor, in a lovely country, open to the sweet breezes from downs and commons, with a far away sea, and a fair prospect around, pays the life-long cost of being unable to look out of his windows on the lovely landscape, that the outside of his residence may be decorated with a costly piece of inappropriate decoration. Even when men are about to build a church for the worship of God,—when, at least, it might be hoped that the best means of accommodating the worshippers, and the best arrangements for their joint worship, would have the first consideration,—it is not so; the war is still between styles of architecture; and if churches combined of Grecian temples and Gothic spires, edifices unsuited to our

climate, our feelings, or our wants, have at last passed out of date, gone out of fashion, it is to be feared, rather than been rejected on sound principles of taste, these have only made way for the re-introduction of a style wherein symbolism is thought of more importance than convenience, the form of the structure more than its fitness for the worship of God or for hearing therein the preached word of the Gospel. These forms may be suited to the ceremonial of that worship which we have laid aside, because it overlaid the truth with, as we believe, useless ceremonies, but are quite unsuited to our simpler worship, our larger concourse, or our desire to hear the words of the preacher.

Now all these evils arise from the want of an educated taste and judgment, which being wanted, men cannot or dare not think for themselves, but are in bondage to fashion, to authority, or to the traditions of antiquity. They neglect or have never had opportunity to learn even these simple rules, which would guide their taste and direct their judgment; namely, that utility should have our first consideration; that constructive propriety should precede ornamentation; and that each age has its own characteristic wants, which are unsuited to the wants of its successor; — rules that, although simple, would root out a large amount of false taste in all things, as well as in architecture, and might be the means of implanting an equal amount of correct judgment and good taste in their stead. But let us turn from architecture to see whether good taste in other matters may not be assisted and regulated by laws and principles; and since the leading characteristic of

architecture is *form*, let us consider the question in respect to Colour.

Colour has its laws of harmonious arrangement and disposition, and requires to be present in definite quantities in any distribution to satisfy and please the eye. Now, although it would not be true to say that this subject has had no consideration among artists or designers, since no arrangement of colour in any composition, either *pictorial* or *ornamental*, can be made without a consideration of some of these *conditions*, it would not be too much to say, that the arrangement of colour has been far too often considered an affair of the eye only, both by them and by the public; and that he who is born with a fine eye for colour — as of course every one thinks himself to be — has no need of rules to guide him. Thus too many have been accustomed to proceed *empirically*, and to laugh at laws they are not at the pains to understand. Now, there is no disputing the fact, that there are varieties of organisation in the human race; and it is well known that there are persons whose vision is perfect as far as the perception of FORM goes, with a completely disorganised sense of colour; so much so as to be able to read the smallest print and clearly to distinguish objects at great distances, yet to be unable to distinguish between red and green; and that from this state to the perfect perception of tints, hues, and their various minute gradations and relations, there is every amount of perceptive discrimination. Now, as all classes have more or less to do with colour, either in the choice of their furniture, their dresses, or the decoration of their houses, apart from any necessity which may belong to their occupation as workmen, manufac-

turers, designers, or tradesmen, it must at once be evident that a knowledge of those natural laws which regulate the harmonies of colours and their just distribution, while it is valuable to all, must be an absolute necessity to those whose business is connected with the choice or arrangement of colour, and that taste in colour will rarely be correct which is not founded on a knowledge of these immutable laws. It is necessary, therefore, to make them more generally known, not only to designers, but to all classes, who are called upon more or less to judge of its employment.

To give, however, some idea of the public education and the public taste as to colour, I may, perhaps, be allowed to relate two circumstances which I think will aptly illustrate the want of instruction prevalent in the matter of colour. Being lately in the workshops of a manufacturer, who employs several hundred workpeople upon a branch of industry largely dependent on colour for its decoration, and happening to speak of the laws of colour, I was interrupted by the remark, — "Laws of colour: to what do you refer? I was not aware that there were any laws of colour." It was to meet this ignorance that this Department issued the diagram of colour now before you*, which, at a small cost, gives, in words intelligible to all, some of the simplest of these laws; and it is hoped that its distribution in our schools, in our workshops, nay, in the nurseries of our children, will prevent in future such an inquiry as whether there are indeed laws of colour. The second incident occurred to me a short time ago,

* A diagram to illustrate the harmonious relations of colour. —Chapman and Hall, 176. Piccadilly.

when, being by accident early in the morning as a casual and unknown customer in the rooms of a carpet warehouse, doing perhaps as large an amount of general business as any house in London, whilst making my own purchase I was led to look round by overhearing a dialogue between the principal of the house and a manufacturer's agent, who had brought up a number of pieces of carpet as new patterns for the tradesman to choose from. His choice was no doubt regulated by what he could judge would be the taste of his customers. When I looked round I found, to my surprise (although, perhaps, it may not so greatly surprise you), that these several patterns consisted of but two showy designs, with very brilliant colouring applied, with perfect indifference, to the same ornamental forms; so that what was green in one was blue in another and red in a third, — at random. As harmony under these conditions must be impossible, and as only one *could* be right, whilst all might be wrong, I think it may illustrate the value that a knowledge of the laws of colour would have been, both to the manufacturer and the trader, and how little their choice could be consonant with what was really good taste, from their want of knowledge of these laws. To explain this I have prepared a diagram to show you that colours must be arranged together in specific and absolute quantities to be agreeable to the eye; it is founded on the experiments of Field, who laid down, from able researches and experiments, what these relative quantities must be. Thus, in arrangements of the primaries, a surface quantity of three yellow requires, to be agreeable to the eye, a surface of five red and eight blue; or three yellow harmonises with its secondary purple as

three to thirteen in surface quantity. If, therefore, in any composition these colours were used interchangeably in the ornamental spaces, it must be inharmonious, unless another law is attended to, which is, that a *hue* of colour diluted with white into a *tint*, requires a great increase of surface quantity to contrast harmoniously with its complementary full *hue*. Of these rules the manufacturer, however, did not seem in the slightest degree aware, since the colours were as full in hue in the one case as in the other. It is proposed to publish this second diagram and a catechism is being prepared with questions relating to the two, which students in the schools connected with the Department will be required to answer, and, which will be useful to the public also, in teaching some at least of those simple laws which must govern all tasteful distributions of colour.

Time will not permit me, even if it were desirable, to give other illustrations of the various ways in which taste is improved and informed; and that correct judgment, which is called *good taste*, acquired by the study of nature's laws, and of those rules which govern artistic and ornamental arrangements. I have said already that the public pays dearly for its want of instruction in those laws—pays, not by hundreds, or by thousands, but by hundreds of thousands: and this might be proved in a multitude of ways. I have just been speaking of colour. Now the least knowledge of its laws will show that the simplest combinations of colours are the most harmonious. Yet the paper stainer, the calico printer, the silk and ribbon weaver, the carpet manufacturer, and a host of others that I need not enu-

merate, are striving to gratify the public by introducing the largest possible number of colours into their patterns; thus, not only, by throwing away useless labour, rendering costly those few to which fashion gives a certain amount of success, but still further increasing their price by those numerous patterns which are failures in the market, being such faulty, overcoloured efforts after novelty — such lawless and abortive productions, that even an uneducated public cannot tolerate them, and they are sold off at the end of the season at a "tremendous sacrifice;" their cost, by the immutable laws of trade, becoming an extra charge, reckoned beforehand, on those which were at least less unsuccessful, which cost, of course, comes out of the pockets of the untaught public. And, if there is this loss on one kind of manufactures or fabrics, what must be the loss on all, when we consider the fearful over-ornamentation they too largely display? — the carving, inlaying, gilding, and burnishing that are thrown away upon them — for where there is much ornamentation we may be pretty sure that it is in bad taste or ill applied. Let me then, in conclusion, point to the other instructional advantages this Department offers to the public, which, if made proper use of, will soon save that public, individually and corporately, far more than the cost of the Establishment. First, then, there is the use of the Schools, both elementary and ornamental, now open to all who choose to pay the regulated fees and follow the prescribed course of study. Secondly, the public Lectures of the Professors conducting the special classes, by whom the laws which govern the application of Ornament to the fabrics they have in charge, will be illustrated and explained.

Thirdly, the Library — open to all on the payment of a trifling fee — wherein the best works on Art and Ornament may be consulted; and, Fourthly, the Museum, wherein the best examples of Decorative Art, and of Art workmanship, are placed before the public. In which Museum, also, it has been thought desirable to place, at the very entrance, a selection of fabrics decorated on *false* principles of taste, and to insert in the Catalogue, for the information of all classes who will take the pains to consult it, those laws of taste which are considered to be infringed in these productions, so that he who runs may read, and those who will not go more deeply into the subject may have no excuse for entire ignorance.

THE END.